

## Remarks

### I. Status

Claims 1-22 are pending. Claim 10 has been withdrawn as directed to a non-elected invention. Accordingly, claims 1-9 and 11-22 are under Examination.

### II. The Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 20 has been rejected pursuant to 35 U.S.C. § 112, second paragraph as indefinite in light of its recitation “coefficient of variation of standard deviation of not more than 10%.” Applicants respectfully traverse and request reconsideration in light of the amended claim.

Applicants have amended claim 20 to clarify that the recitation relates to the measured value of the volume resistivity of the resin. Support for the recitation can be found in Table 1 of the present Specification (the Examiner will note that the coefficient of variation is defined as the ratio of the mean to the standard deviation). Specifically, Table 1 shows that the ratio of the mean volume resistivity of the resin of Example 1 was  $996 \Omega \cdot \text{cm}$  and that the standard deviation for the resin was  $34.3 \Omega \cdot \text{cm}$ . The ratio  $34.3 \Omega \cdot \text{cm} / 996 \Omega \cdot \text{cm}$  is 3.44% as indicated, thus establishing that the coefficient of variation relates to the mean volume resistivity of the resin. Support for the claim is also found in the specification at page 12, lines 14-17.

In light of the foregoing, Applicants respectfully submit that the rejection of claim 20 pursuant to 35 U.S.C. § 112, second paragraph may be properly withdrawn.

### III. The Rejections Under 35 U.S.C. § 102

Claims 1, 3, 5, 9, 11, 15, 19 and 22 have been rejected pursuant to 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,500,660 (**Minamisawa *et al.***). **Minamisawa *et al.*** is stated to teach a bisphenol A type epoxy resin composition having excellent adhesive strength, a novolak type epoxy resin, a glycidyl amine type epoxy resin, a

reaction product between a acrylonitrile-butadiene copolymer and a glycidyl amine type epoxy, a nitrile rubber, curing agent and accelerator and a reinforcing fiber. The examiner has noted that the reinforcing fibers that can be used include carbon fibers with sizes ranging from 1 to 100 mm (citing column 6, lines 51-57 of **Minamisawa *et al.***). Applicants respectfully traverse and request reconsideration.

Applicants respectfully submit that the claimed invention recites the use of *vapor-growth* carbon (please note page 8, line 19 – page 9, line 10 of the present Specification), and that such a carbon composition is neither taught nor suggested in **Minamisawa *et al.***. Additionally, only a resin composition for the prepreg is described by **Minamisawa *et al.***.

Accordingly, Applicants respectfully submit that the presently claimed invention is not anticipated by **Minamisawa *et al.***, and that the rejection of claims 1, 3, 5, 9, 11, 15, 19 and 22 pursuant to 35 U.S.C. § 102(b) may be properly withdrawn.

#### **IV. The Rejections Under 35 U.S.C. § 103**

Claims 2, 4, 6-8, 12-14, 16-18 and 21 have been rejected pursuant to 35 U.S.C. § 103(a) as obvious in light of U.S. Patent No. 4,500,660 (**Minamisawa *et al.***).

**Minamisawa *et al.*** has been relied upon by the Examiner as described above. The Examiner has noted that the reference does not disclose (1) the molecular weights of the acrylonitrile butadiene rubber, (2) the weight percentage of the carbon fiber present in the composition, or 3) the use of an electroconductive sheet having a thickness of 1 mm. The Examiner has proposed that deficiencies (1) and (2) reflect obvious optimizations, and that deficiency (3) represents an obvious design choice. Applicants respectfully traverse and request reconsideration.

Applicants respectfully submit that in order to render the present claims obvious, the “optimizations” and “design choice” must relate to the prior art, not Applicants invention. Presumably **Minamisawa *et al.*** discloses the optimized constituents of its compositions. In this regard, it teaches that the weight percentage of the carbon fiber are not 1-20 parts by weight, but should vary from 40-80% wt % (please see, **Minamisawa**

*et al.*, column 7, lines 9-11). No basis is thus seen for concluding, for example, that the use of an acrylonitrile-butadiene rubber having both end-groups substituted by carboxyl groups having molecular weights in the range of not less than 1,000 would have been an obvious optimization of the compositions of **Minamisawa *et al.*** Likewise, no basis is seen for concluding, for example, that the use of 1 to 20 parts by weight carbon fiber would have been an obvious optimization of the compositions of **Minamisawa *et al.***

Moreover, as discussed above, it is respectfully submitted that the claimed invention recites the use of *vapor-growth* carbon (please note page 8, line 19 – page 9, line 10 of the present Specification), and that such a carbon composition is neither taught nor suggested in **Minamisawa *et al.*** Additionally, only a resin composition for the prepreg is described by **Minamisawa *et al.***

Accordingly, Applicants respectfully submit that the presently claimed invention is not anticipated by **Minamisawa *et al.***, and that the rejection of claims 2, 4, 6-8, 12-14, 16-18 and 21 pursuant to 35 U.S.C. § 103(a) may be properly withdrawn.

## **V. Concluding Remarks**

Applicants submit that the present response is complete and complies with the requirements of 35 U.S.C. §121. The Application is believed to be in condition for Examination and early notice of favorable action is respectfully requested. Should the Examiner have any remaining questions regarding the subject invention or its patentability, Applicants encourage the Examiner to contact the undersigned to answer such questions or provide any desired additional information.

Respectfully Submitted,

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